

## APPENDIX

### UNITED STATES UNITS WITH METRIC EQUIVALENTS

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|--|
| 1 inch=2.540 centimeters.                                      |
| 1 foot=0.3048 meter.   |
| 1 yard=0.9144 meter.   |
| 1 mile=1.609 kilometers.                                       |
| 1 square yard=0.8361 square meter.                             |
| 1 acre=0.4047 hectare.   |
| 1 square mile=2.590 square kilometers.                         |
| 1 cubic inch=16.39 cubic centimeters.                          |
| 1 cubic foot=0.02832 cubic meter.                              |
| 1 cubic yard=0.7646 cubic meter.                               |
| 1 liquid quart=0.9463 liter.                                   |
| 1 gallon=231 cubic inches=3.785 liters.                        |
| 1 bushel (measured)=2,150.4 cubic inches=35.24 liters.         |
| 1 avoirdupois ounce=28.35 grams.                               |
| 1 troy ounce=31.10 grams.                                      |
| 1 pound=0.4536 kilogram.                                       |
| 1 long ton=2,240 pounds=1.0160 metric tons of 1,000 kilograms. |
| 1 short ton=2,000 pounds=0.9072 metric ton.                    |

### UNITED STATES GALLON AND BUSHEL WITH BRITISH EQUIVALENTS

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|---|
| 1 United States gallon=231 cubic inches=0.8331 imperial gallon.     |
| 1 United States bushel=2,150.4 cubic inches=0.9094 imperial bushel. |

### OFFICIAL WEIGHTS OF THE BARREL OF NONLIQUID PRODUCTS

|  | Pounds | Kilo-grams |
|--|--------|------------|
| Wheat flour, barley flour, rye flour, and corn meal (net) <sup>1</sup> ..... | 196    | 88.90      |
| Rosin, tar, and pitch (gross).....   | 500    | 226.80     |
| Fish, pickled (net).....   | 200    | 90.72      |
| Lime (net).....  | 200    | 90.72      |
| Cement (4 bags counted as 1 barrel) (net) <sup>1</sup> .....                 | 376    | 170.65     |

<sup>1</sup> Except as noted.

### OFFICIAL WEIGHTS OF THE UNITED STATES BUSHEL

|  | Pounds | Kilo-grams |
|--|--------|------------|
| Wheat, beans, peas, potatoes (Irish or white).....               | 60     | 27.22      |
| Rye, corn (maize), linseed (flaxseed), maslin (mixed grain)..... | 56     | 25.40      |
| Barley, buckwheat.....   | 48     | 21.77      |
| Onions.....  | 57     | 25.86      |
| Rough rice.....  | 45     | 20.41      |
| Malt.....  | 34     | 15.42      |
| Oats.....  | 32     | 14.51      |
| Peanuts, green, in shell.....                                    | 22     | 9.98       |
| Castor beans.....  | 50     | 22.68      |

### APPROXIMATE WEIGHT OF PETROLEUM AND PRODUCTS

In the United States petroleum and its products are measured by bulk, not weight. Whether handled in containers or without them the quantities are customarily reduced to the equivalent of barrels of 42 United States gallons (barrel thus equals 158.984 liters). In many foreign countries these commodities are measured by weight. The specific gravity of the different grades of crude petroleum and of the finished products varies materially. On the basis of approximate averages the Department of Commerce in converting foreign weight statistics to gallons or barrels of 42 gallons uses the factors shown in the following table:

|  | Weight of United States gallon |            | Weight of barrel of 42 gallons |            |
|--|--------------------------------|------------|--------------------------------|------------|
|  | Pounds                         | Kilo-grams | Pounds                         | Kilo-grams |
| Crude petroleum.....   | 7.3                            | 3.311      | 306.6                          | 139.07     |
| Lubricating oils.....  | 7.0                            | 3.175      | 294.0                          | 133.36     |
| Illuminating oils (kerosene).....                                | 6.6                            | 2.994      | 277.2                          | 125.74     |
| Gasoline and related products (motor spirit, benzine, etc.)..... | 6.1                            | 2.767      | 256.2                          | 116.21     |
| Fuel and gas oils.....   | 7.7                            | 3.493      | 323.4                          | 146.69     |